Claims

1-32 (previously canceled)

33. (currently amended) An apparatus comprising:
a light source to produce light in first, second and third wavelength bands;
a plate-type transflective polarizing beam splitter
to receive the first, second, and third wavelength bands of light,
to transmit, in a first polarization direction, the first wavelength band of light, and
to reflect, in a second polarization direction, the second and third wavelength bands of light; ~~and~~
a color filter
to receive the second and third wavelength bands of light,
to transmit in the second polarization direction, the second wavelength band fo light, and
to reflect in the second polarization direction, the third wavelength band of light; and
first, second and third reflective liquid crystal light valves
to selectively reflect portions of the respective first, second and third wavelength bands of light toward a projection lens.

34. (previously presented) The apparatus of claim 33, wherein at least a selected one of the reflective liquid crystal light valves includes a plurality of pixels selectively switchable between a dark polarization state and an illuminated polarization state.

35. (previously presented) The apparatus of claim 34, wherein the pixels of the first reflective liquid crystal light valve are to be selectively switched to the dark polarization state to reflect selected portions of the first wavelength band of light, in the first polarization direction, back through the plate-type transflective polarizing beam splitter toward the light source.

36. (previously presented) The apparatus of claim 34, wherein the pixels of the second reflective liquid crystal light valve are to be selectively switched to the dark polarization state to reflect selected portions of the second wavelength band of light, in the second polarization direction, back through the color filter, off the plate-type transflective polarizing beam splitter, toward the light source.

37. (previously presented) The apparatus of claim 34, wherein the pixels of the second reflective liquid crystal light valve are to be selectively switched to the illuminated polarization state to reflect selected portions of the second wavelength band of light, in the first polarization direction, through the color filter and the plate-type transflective polarizing beam splitter toward the projection lens.

38. (previously presented) The apparatus of claim 34, wherein the pixels of the third reflective liquid crystal light valve are to be selectively switched to the dark polarization state to reflect selected portions of the third wavelength band of light, in the second polarization direction, off the color filter and the plate-type transflective polarizing beam splitter toward the light source.

39. (previously presented) The apparatus of claim 34, wherein the pixels of the third reflective liquid crystal light valve are to be selectively switched to the illuminated polarization state to reflect selected portions of the third wavelength band of light, in the first polarization direction, off the color filter through the plate-type transflective polarizing beam splitter toward the projection lens.

40. (previously presented) The apparatus of claim 33, wherein the light source emits the first, second, and third wavelength bands of light in the second polarization direction.

41. (previously presented) The apparatus of claim 40, further comprising:
a spectrally selective input device
to receive the first, second, and third wavelength bands of light from the light source;
to transmit the first wavelength band of light in a first polarization direction; and
to transmit the second and third wavelength bands of light in the second polarization direction.

42. (previously presented) The apparatus of claim 41, wherein the spectrally selective input device is of an optical retardation type.

43. (previously presented) The apparatus of claim 33, further comprising:
one or more dichroic trim filters respectively associated with one or more of the first, second, and third light valves, to reflect selected wavelength bands of light without changing their polarization direction.

44. (previously presented) The apparatus of claim 33, wherein the plate-type transflective polarizing beam splitter includes at least a selected one of a wire grid device, a multi-layer thin film device, a cholesteric polymer liquid crystal device, and a laminated polymer sheet device.

45. (previously presented) A system comprising:
a video unit to output a video signal; and
a projection system, coupled to the video unit, to receive the video signal and project video, said projection system comprising
a light source to produce light in first, second, and third wavelength bands;
a reflective light valve arrangement optically coupled to the light source, comprising a plate-type transflective polarizing beam splitter, a color filter, and first, second and third reflective liquid crystal light valves; and

a projection lens optically coupled to the reflective light valve arrangement.

46. (previously presented) The system of claim 45, wherein

the plate-type transflective polarizing beam splitter is to receive the first, second, and third wavelength bands of light, to transmit, in a first polarization direction, the first wavelength band of light and to reflect in a second polarization direction the second and third wavelength bands of light;

the color filter is to receive the second and third wavelength bands of light, to transmit in the second polarization direction the second wavelength band of light, and to reflect in the second polarization direction the third wavelength band of light; and

the first, second, and third reflective liquid crystal light valves to selectively reflect portions of the respective first, second, and third wavelength bands of light toward the projection lens.

47. (previously presented) The system of claim 45, wherein at least a selected one of the reflective liquid crystal light valves includes a plurality of pixels selectively switchable between a dark polarization state and an illuminated polarization state.

48. (previously presented) The system of claim 45, in which the first, second, and third wavelength bands of light each include a selected one of a green, a blue, and a red wavelength band.

49. (previously presented) The system of claim 45, in which the light source emits the first, second, and third wavelength bands of light in a second polarization direction.

50. (previously presented) The system of claim 46, in which the first and second polarization directions are substantially orthogonal linear polarization directions.

51. (previously presented) The system of claim 45, further comprising:

each of the first, second, and third wavelength bands of light having selected ones of a first and second polarization direction; and

one or more dichroic trim filters respectively associated with one or more of the first, second, and third reflective liquid crystal light valves, to reflect selected wavelength bands of light without changing their polarization direction.

52. (previously presented) The system of claim 45, in which the plate-type transflective polarizing beam splitter includes at least one of a wire grid device, a multi-layer thin film device, a cholesteric polymer liquid crystal device, and a laminated polymer sheet device.

53. (previously presented) The system of claim 47, further comprising:

a controller, coupled to the video unit, to selectively control the plurality of pixels of the first, second, and third reflective liquid crystal light valves.